

HIGH ACCURACY FUEL METERING SYSTEM FOR TURBINE ENGINES

Abstract of the Disclosure

5 A fuel control system (10) in a turbine engine includes a centrifugal
boost pump (20) that receives fuel from a fuel tank and increases the
pressure of the fuel. A piston pump (40) boosts the fuel pressure to
levels required by the turbine engine and meters an amount of fuel
delivered to the turbine engine. A speed controlled electric motor (30)
drives the piston pump (40). The electric motor (30) is driven by an
10 electronic speed control wherein by controlling motor speed, fuel flow to
the turbine engine is controlled, and fuel flow is directly proportional to
the speed of the motor (30). Accordingly, the system (10) seeks
precision of fuel control that can be achieved with an accuracy of better
than $\pm 3\%$ over a 30:1 fuel flow range.